

ABSTRACT

A frequency modulated laser comprises a laser cavity in which the gain section of the laser cavity is imbedded within a phase modulation section of the cavity. The laser cavity further comprises electrically-sensitive material, so that an electric field applied across the laser cavity changes the index of refraction within the laser cavity according to the magnitude of the change in the electric field. Uniformly and simultaneously changing the index of refraction along the laser cavity length modulates the frequency of the laser light produced within the laser cavity. The upper bound of the frequency modulation is limited by the propagation time for the electric field to cross the laser cavity.